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SPECIFICATION

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VEHICLE IDENTIFICATION TRACKING SYSTEM

Background of Invention

[0001] 1. Field of the Invention

[0002] This invention relates to a system for tracking vehicles and other objects and, in particular, to a tracking system for creating and recording a unique identification of such vehicles or other objects that may be accessed on a network.

[0003] 2. Description of Related Art

[0004] Vehicle identification numbers (VIN) and hull identification numbers (HIN) have been used for many years on motor vehicles and boats, respectively, to provide a unique alphanumeric identification for the vehicle. These VIN and HIN alphanumeric identifiers are useful in determining whether the vehicles are properly registered and also to locate and return stolen vehicles. Federal and state laws have required the marking of VINs on motor vehicles and HINs on boats for this purpose. These VINs and HINs are generally applied to the vehicle by the manufacturer in accordance with standards which permit the identification of the manufacturer and the particular vehicle and, optionally, with dates of manufacture and equipment on the vehicle. In the case of land vehicles, federal law has required the VIN to be marked on several locations on the vehicle body and on key vehicle parts. Federal law has also required the HIN to be marked on boats in a manner that is both visible and that will show any attempt to remove or alter the number.

[0005] It has also become common to mark VINs on other parts of a motor vehicle, beyond those required by federal law. For example, VIN can be etched or otherwise marked onto the glass on a motor vehicle to permit the tracking of parts stripped from stolen vehicles. The system employed by Vice Script Incorporated of Cheshire, Connecticut, has been particularly successful in this regard.

[0006] Notwithstanding the marking requirements for such vehicles, the location of the VIN and HIN indicia is generally known to thieves. As a result, after a vehicle is

stolen, attempts are often made to remove or alter the VIN or HIN indicia and, in some instances, to substitute false numbers, to disguise the fact that the vehicle is stolen.

[0007] It would be useful to be able to create a VIN, HIN or other unique indicia which may be applied to a vehicle or other object, and record the unique indicia, its location and other pertinent information relating to the object in a manner accessible to owners, dealers and authorities.

Summary of Invention

[0008] Bearing in mind the problems and deficiencies of the prior art, it is therefore an object of the present invention to provide an improved vehicle identification tracking system.

[0009] It is another object of the invention is to provide a method and system of creating an identification label for a vehicle or other object, on a location other than that marked by the manufacturer.

[0010] A further object of the present invention to provide a method of recording a unique identification of a vehicle or other object and its location, and maintaining such information for search by an owner or other authorized person in case of theft of the object.

[0011] The above and other objects, which will be apparent to those skilled in art, are achieved in the present invention which is directed to a method of tracking objects comprising causing a unique identification to be marked onto a surface of an object at a location other than that marked by the manufacturer of the object, and recording the unique identification of the object in a database. The method then further includes maintaining the database containing the unique identification and object description for access on a network by: i) an owner of the object to record information regarding theft of the object and ii) an authorized person to search for information regarding theft of the object. Typically, the object is a vehicle and the unique identification is the same identification assigned by a manufacturer of the vehicle.

[0012] Preferably, the unique identification is a discrete alphanumeric identification caused to be marked at a selected location onto the object surface, and the location of the discrete identification is recorded in the database. The method also provides to the owner or other authorized person a password for access to the database. The database may be maintained for searching by an authorized person for the object description, discrete alphanumeric identification, location of the discrete alphanumeric identification and owner. The method may further include contacting the owner, by the authorized person, upon obtaining a match for information on the object selected from the group

consisting of object description, discrete alphanumeric identification, location of the identification and owner.

- [0013] Upon a request by an owner, the method may include editing the database for information on the object selected from the group consisting of object description, discrete alphanumeric identification, location of the identification and owner.
- [0014] In another aspect, the present invention provides a method of assigning identification to objects comprising providing a unique identification for an object, transmitting the unique identification and a description of the object from a remote location to a central approval location, and creating an approval code based on the unique identification and the object description. Thereafter, the method includes recording the unique identification, the object description and the approval code in a database associated with the approval location, using the approval code to authorize creation of an identification label containing the unique identification for the object, and assigning a debit to the remote location for the identification label.
- [0015] The method may further include transmitting the approval code and the debit from the approval location to the remote location and using the approval code to create an identification label containing the unique identification for the object at the remote location. The identification label may comprises a single-use-only label, such as a stencil or an adhesive label.
- [0016] The approval code may be used to create an identification label containing the unique identification for the object at a central location, and the method may further include shipping the identification label to the remote location.
- [0017] The method may include transmitting and recording in a database identification of the owner of the object, and subsequently transmitting acknowledgement of the recording of the unique identification and the object description to the owner of the object. The database containing the unique identification and object description may accessible by an owner of the object to record information regarding theft of the object, or by an authority to search for information regarding theft of the object.
- [0018] In a further aspect, the present invention provides a method of assigning identification to and tracking objects comprising providing a unique identification for an object, transmitting the unique identification and a description of the object from a remote location to an approval location, and creating an approval code based on the unique identification and the object description. The method then includes recording the unique identification, the object description and the approval code in a database associated with the approval location, using the approval code to create an identification label containing the unique identification for the object, and assigning a debit to the

remote location for the identification label. The identification label is then used to mark the unique identification onto the object surface. The method then maintains the database containing the unique identification and object description for access on a network by: i) an owner of the object to record information regarding theft of the object and ii) an authorized person to search for information regarding theft of the object.

Brief Description of Drawings

- [0019] The features of the invention believed to be novel and the elements characteristic of the invention are set forth with particularity in the appended claims. The figures are for illustration purposes only and are not drawn to scale. The invention itself, however, both as to organization and method of operation, may best be understood by reference to the detailed description which follows taken in conjunction with the accompanying drawings in which:
- [0020] Fig. 1 is a schematic of a network that may be used to create vehicle identification indicia as well as to store vehicle information and track such vehicles once they are recovered.
- [0021] Fig. 2 is a block diagram of the preferred method of assigning identification to, and tracking, objects

Detailed Description

- [0022] In describing the preferred embodiment of the present invention, reference will be made herein to Figs. 1 and 2 of the drawings in which like numerals refer to like features of the invention
- [0023] The present invention provides a method and system for creating a unique identification to be marked thereon of an object, for recording and storing the pertinent object information, and for tracking and identifying the owner of the object once it is recovered. While the invention is particularly useful for vehicles such as automobiles, trucks and boats, it may also be used for other objects that are vulnerable to theft or otherwise need to be tracked.
- [0024] In order that the motor vehicle or other object may be tracked, a unique, discrete identification should be provided for the object, for example, an alphanumeric symbol or a logo. In the case of land vehicles and boats, manufacturers typically provide VIN and HIN identifiers, respectively, which are marked on known locations on the vehicles and are also provided to governmental authorities upon registration of the vehicle. The present invention provides for such or other unique discrete identifiers to

be marked on one or more additional, typically secret or unrevealed locations on the vehicle. Although vehicles are used in the preferred embodiment described below, it should be understood that the present invention could be broadly applied to any object have suitable surface for marking. A method for marking the unique identification on an object is disclosed in copending U.S. application no. [attorneys docket no. VIC100001000] filed on even date herewith.

[0025] The method of the present invention for creating a unique identification to be marked thereon of an object, for recording and storing the pertinent object information, and for tracking and identifying the owner of the object once it is recovered, may be implemented by a computer program or software incorporating the process steps and instructions described below in otherwise conventional program code and stored on an otherwise conventional program storage device. As shown in Fig. 1, the program code as well as any database information for system 20 may be stored in computer server 22 on program storage device 24, such as a semiconductor chip, a read-only memory, magnetic media such as a diskette or computer hard drive, or optical media such as a CD or DVD ROM. Computer system 22 has a microprocessor for reading and executing the stored program code in device 28 in the manner described below.

[0026] More specifically, system 20 connects a central authority's database 24 in server 22 via the internet to one or more client computers 28a, 28b, ..., 28n at a remote location. Such client computers may be those of the customers or owners of the vehicles or other objects to be marked and tracked, those of dealers who are authorized to apply the unique identification to the vehicles, or those of governmental authorities such as the police or FBI who wish to search the database for information concerning a stolen vehicle. As will be described further below, a label maker 30, controlled by the server 22, may be used to create the unique identification label 40. Alternatively, such label maker 30' may be attached to a client computer in order to make an identification label 40'.

[0027] The method and system of creating the identification indicia and tracking vehicles is described in connection with Internet access in Figure 2, which is initiated by accessing a homepage 100. A customer, e.g., vehicle owner, may log on to the system 102, or a dealer that applies the unique indicia or a governmental authority may log on to the system 104. In the case of a customer log-in, the vehicle VIN or HIN number may be utilized as well as any other unique personal indicia such as a social security number, or a unique user name and password combination. In the case of log-in by dealers and authorities, other unique user names and passwords may be selected by the dealer/authority or assigned by the central authority operating the server. If the customer or dealer wishes to order a label 106, there will be provided from the client computer appropriate vehicle data 108 including the vehicle description, the vehicle

identification, i.e. VIN or HIN, and the location on the vehicle where the identification indicia is to be applied. Additional information may be supplied such as the identification of the vehicle insurance company, and current mileage or hour usage. The location on which the identification indicia is to be applied may include, in the case of an automobile or truck, the window glass, wheels, light lenses, bumpers, vehicle body panels, or major structural components such as axles, transmissions and/or engines. Where a dealer such as a body shop is applying the VIN or other identification to a replacement vehicle part, such as after an accident or other repair, the status of the vehicle and reason for applying the identification 110 may also be included in the database. So that the location of the database may be determined, the identification applied to the vehicle or other object preferably also includes the name or other identification for the central authority operating the system or applying the indicia. The server then records the unique identification and object description and approval code in the database 24.

[0028] The customer or dealer then also provides payment information 112 to the server for approval. The payment information may be, in the case of a dealer, verification of current good standing or, in the case of a customer, a credit card number. The server assigns a debit for the amount to be charged for the label, which debit is either then transmitted subsequently to the dealer's or customer's client computer or to the customer's credit card provider. Authorization 114 by the server also includes creation of an approval code based on such identification and object description and identity of the customer or dealer. The approval code created by the authorization step 114 may be then used to create the actual identification label.

[0029] In the case of a customer transaction, the central authority will normally create the identification label 40 on a label maker 30 controlled by server 22 upon creation of the authorization and approval code. Such label may be a single-use-only adhesive label containing the vehicle identification number or other identification indicia, such as that utilized for vehicle state registration stickers. Alternatively, where a dealer is to apply the identifying indicia, the single-use-only label may also comprise a stencil containing cutouts of the unique alpha numeric identifier for the vehicle, which may then be used to apply the VIN or HIN using a paint. A suitable stencil maker is a Lynx Sign Cutter, Model S-60 available from SignWarehouse.com of Sherman, Texas. The label is then shipped to the customer or dealer who then applies it to the identified location of the vehicle.

[0030] In the case of a dealer transaction, the label maker 30' may be located at the dealer's client computer location 28b. In that case, the authorization 114 approval code is transmitted from the server 22 to the client computer 28b in the form of a token, and the client computer is able to activate the label maker 30' to create the identification

label 40' at the dealer's location. The dealer then applies the label or stencil to the selected location on the customer's vehicle.

[0031] In the event that the vehicle is stolen, a customer may log-in to the system 102 and report the status of the vehicle as being stolen, 118. This information is then included in the server database 24 with the other information relating to that vehicle.

[0032] If a governmental authority or a dealer become aware of a recovered vehicle, or wishes to otherwise check the vehicle status, it may log-in 104 to the system and, using either the vehicle identification number or other identifying characteristic of the vehicle, check the status of the vehicle 120 as being reported stolen or not. In the event that the vehicle is recovered and identified as being in the database 24, the central authority may then notify the customer of the recovery of the vehicle and then change the status to recovered.

[0033] Thus, the present invention provides an improved vehicle identification tracking system which creates an identification label for a vehicle or other object, on a location other than that marked by the manufacturer, and further provides a method of recording and maintaining such information for search by an owner or other authorized person in case of theft of the object.

[0034] While the present invention has been particularly described, in conjunction with a specific preferred embodiment, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art in light of the foregoing description. It is therefore contemplated that the appended claims will embrace any such alternatives, modifications and variations as falling within the true scope and spirit of the present invention.

[0035] What is claimed is:

Claims

[c1]

1. A method of tracking objects comprising:

causing a unique identification to be marked onto a surface of an object at a location other than that marked by the manufacturer of the object;

recording the unique identification of the object in a database; and

[0030] In the event that the vehicle is stolen, a customer may log-in to the system 102 and report the status of the vehicle as being stolen, 118. This information is then included in the server database 24 with the other information relating to that vehicle.

[0031] If a governmental authority or a dealer become aware of a recovered vehicle, or wishes to otherwise check the vehicle status, it may log-in 104 to the system and, using either the vehicle identification number or other identifying characteristic of the vehicle, check the status of the vehicle 120 as being reported stolen or not. In the event that the vehicle is recovered and identified as being in the database 24, the central authority may then notify the customer of the recovery of the vehicle and then change the status to recovered.

[0032] Thus, the present invention provides an improved vehicle identification tracking system which creates an identification label for a vehicle or other object, on a location other than that marked by the manufacturer, and further provides a method of recording and maintaining such information for search by an owner or other authorized person in case of theft of the object.

[0033] While the present invention has been particularly described, in conjunction with a specific preferred embodiment, it is evident that many alternatives, modifications and variations will be apparent to those skilled in the art in light of the foregoing description. It is therefore contemplated that the appended claims will embrace any such alternatives, modifications and variations as falling within the true scope and spirit of the present invention.

[0034] What is claimed is:

Claims

[c1]

1. A method of tracking objects comprising:

causing a unique identification to be marked onto a surface of an object at a location other than that marked by the manufacturer of the object;

recording the unique identification of the object in a database; and

maintaining the database containing the unique identification and object description for access on a network by: i) an owner of the object to record information regarding theft of the object and ii) an authorized person to search for information regarding theft of the object.

[c2]

2. The method of claim 1 wherein the unique identification is a discrete alphanumeric identification caused to be marked at a selected location onto the object surface.

[c3]

3. The method of claim 1 wherein the unique identification is caused to be marked onto a selected location onto the object surface, and wherein the location of the discrete identification is recorded in the database.

[c4]

4. The method of claim 1 wherein the unique identification is a discrete alphanumeric identification caused to be marked onto a selected location onto the object surface, wherein the location of the discrete alphanumeric identification is recorded in the database, and wherein the database is maintained for searching by an authorized person for the object description, discrete alphanumeric identification, location of the discrete alphanumeric identification and owner.

[c5]

5. The method of claim 1 further including, upon a request by an owner, editing the database for information on the object selected from the group consisting of object description, discrete alphanumeric identification, location of the identification and owner.

[c6]

6. The method of claim 5 further including providing to the owner a password for access to the database.

[c7]

7. The method of claim 1 further including, upon a request by an authorized person, searching of the database for information on the object comprising object description, discrete alphanumeric identification, location of the identification and owner.

[c8]

8. The method of claim 7 further including contacting the owner, by the authorized person, upon obtaining a match for information on the object selected from the group consisting of object description, discrete alphanumeric identification, location of the identification and owner.

[c9]

9. The method of claim 1 wherein the object is a vehicle and the unique identification is the same identification assigned by a manufacturer of the vehicle.

[c10]

10. The method of claim 1 further including creating and recording in the database an approval code based on the unique identification and the object description.

[c11]

11. A method of assigning identification to objects comprising:

providing a unique identification for an object;

transmitting the unique identification and a description of the object from a remote location to a central approval location;

creating an approval code based on the unique identification and the object description;

recording the unique identification, the object description and the approval code in a database associated with the approval location;

using the approval code to authorize creation of an identification label containing the unique identification for the object; and

assigning a debit to the remote location for the identification label.

[c12]

12. The method of claim 11 further including transmitting the approval code and the debit from the approval location to the remote location.

[c13]

13. The method of claim 11 further including transmitting the approval code to the remote location, and wherein the approval code is used to create an identification label containing the unique identification for the object at the remote location.

[c14]

14. The method of claim 13 wherein the identification label comprises a single-use-only label.

[c15]

15. The method of claim 14 wherein the single-use-only label comprises a stencil.

[c16]

16. The method of claim 14 wherein the single-use-only label comprises an adhesive label.

[c17]

17. The method of claim 11 wherein the approval code is used to create an identification label containing the unique identification for the object at a central location, and further including shipping the identification label to the remote location.

[c18]

18. The method of claim 11 including transmitting and recording identification of the owner of the object, and further including transmitting acknowledgement of the recording of the unique identification and the object description to the owner of the object.

[c19]

19. The method of claim 11 wherein the database containing the unique identification and object description is accessible by an owner of the object to record information regarding theft of the object.

[c20]

20. The method of claim 11 wherein the database containing the unique identification and object description is accessible by an authority to search for information regarding theft of the object.

[c21]

21. A method of assigning identification to and tracking objects comprising:

providing a unique identification for an object;

transmitting the unique identification and a description of the object from a remote location to an approval location;

creating an approval code based on the unique identification and the object description;

recording the unique identification, the object description and the approval code in a database associated with the approval location;

using the approval code to create an identification label containing the unique identification for the object;

assigning a debit to the remote location for the identification label;

using the identification label to mark the unique identification onto the object surface;
and

maintaining the database containing the unique identification and object description for access on a network by: i) an owner of the object to record information regarding theft of the object and ii) an authorized person to search for information regarding theft of the object.

Abstract of Disclosure

[0035] A method of assigning identification to and tracking objects comprises transmitting a unique identification for an object and a description of the object from a remote location to an approval location, and creating an approval code based on the unique identification and the object description. The method then includes recording the unique identification, the object description and the approval code in a database, using the approval code to create an identification label containing the unique identification for the object, and assigning a debit to the remote location for the identification label. The identification label is then used to mark the unique identification onto the object surface. The database containing the unique identification and object description may be accessed on a network by: i) an owner of the object to record information regarding theft of the object and ii) an authorized person to search for information regarding theft of the object.

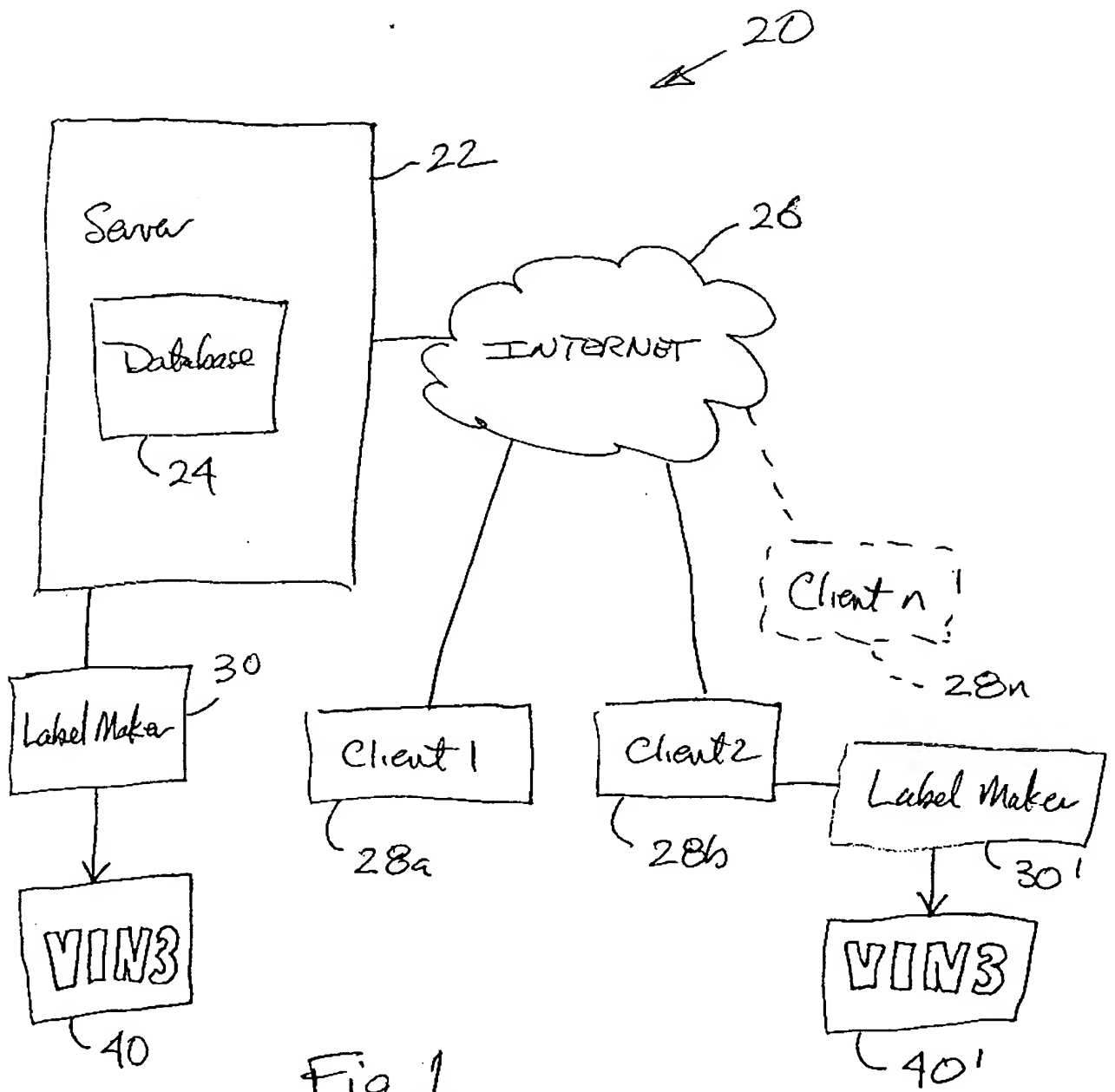


Fig. 1

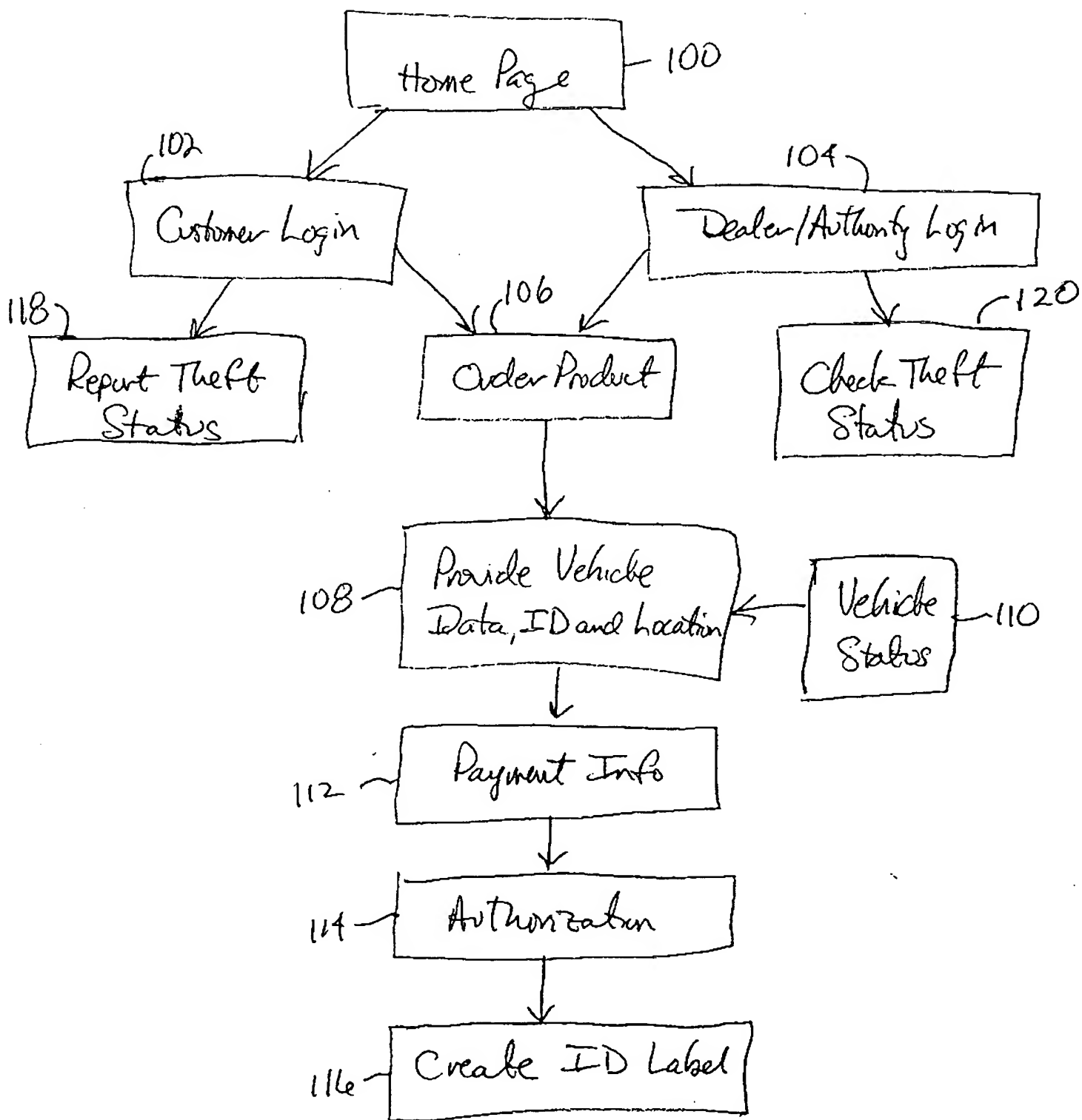


Fig. 2